

Marine Mammals

Other Toothed Whales



Feresa attenuata (DD)
Grampus griseus (DD)
Indopacetus pacificus (DD)
Kogia breviceps (LC)
Kogia sima (LC)
Lagenodelphis hosei (DD)
Mesoplodon densirostris (DD)
Orcinus orca (LR)
Peponocephala electra (LC)
Physeter macrocephalus (VU)
Stenella coeruleoalba (LR)
Steno bredanensis (DD)
Ziphius cavirostris (DD)

SPECIES STATUS:

IUCN Red List - Various (see abbreviations below)

IUCN Data Deficient (DD)

IUCN Lower Risk/Conservation Dependent (LR)

IUCN Lowest Concern (LC)

IUCN Vulnerable (VU)

Sperm whale is Federally and State listed as Endangered

SPECIES INFORMATION: The other toothed whales of Hawai‘i besides the spotted, bottlenose, and spinner dolphins and false killer and short-finned pilot whales, which are considered in separate fact sheets, are: pygmy killer whales (*Feresa attenuata*), Risso’s dolphins (*Grampus griseus*), Longman’s beaked whales (*Indopacetus pacificus*), pygmy sperm whale (*Kogia breviceps*), dwarf sperm whales (*Kogia sima*), Fraser’s dolphins (*Lagenodelphis hosei*), Blainville’s beaked whales (*Mesoplodon densirostris*), killer whales (*Orcinus orca*), melon-headed whales (*Peponocephala electra*), sperm whales (*Physeter macrocephalus*), striped dolphins (*Stenella coeruleoalba*), nai’a or rough-toothed dolphins (*Steno bredanensis*), and Cuvier’s beaked whales (*Ziphius cavirostris*). None of the other species have Hawaiian names. The sperm whale is the only toothed-whale in Hawai‘i that is a federally listed endangered species. Most of these species except striped dolphins, dwarf sperm whales, and killer whales live only in deep, oceanic waters but can occur within State waters, especially in areas with steep drop-offs like off much of the island of Hawai‘i and Southwest Maui County. Feeding habits vary for these

toothed whales. The sperm whale feeds on anything from large squid to sharks, demersal rays and bony fish, while the pygmy and dwarf sperm whales feed on smaller cephalopods and crustaceans. The beaked whales and the majority of the ocean dolphins feed on squid and small fishes. Some also feed on crustaceans. They differ, however, in their foraging behaviors. The sperm whales, nai'a, Fraser's, and Risso's dolphins and Cuvier's beaked and melon-headed whales all feed in deep waters. The striped dolphin has a more diverse diet and eats anywhere in the water column. Killer whales have the most diverse diet of all the toothed whales. They feed on anything from schooling fish and squid to sharks and large baleen whales; they also feed cooperatively. There is almost no reproduction information available for approximately half of these whales, except for pygmy sperm whales, dwarf sperm whales, melon-headed whales, sperm whales, and striped dolphins. Gestation lasts for one year for the pygmy and dwarf sperm whales, the striped dolphin, and the melon-headed whale. The killer whale and sperm whale reach maturity slowly, usually after 11 years of age. The sperm whale breeds in the tropics and gives birth in the spring. Killer whales are only occasional visitors to Hawai'i. Killer whale calves are nursed for a year. Calving intervals for the striped dolphin are four years. Striped dolphins also provide care for their young in groups of about 30. Additionally, most species have a single baby at a time. Some of these whales such as the pygmy and dwarf sperm whales are solitary, while others such as the Fraser's dolphin and the melon-headed whale form large social groups. Still others such as the sperm whale and Longman's beaked whale form strong social bonds, while killer whales form social groups also with strong social bonds.

DISTRIBUTION: The pygmy killer whale has been sighted off Ni'ihau, O'ahu, Maui, and the island of Hawai'i. Risso's dolphins are rare and have been sighted off the coast of Kona. Longman's beaked whales and Fraser's dolphins have not been recorded in State waters, but they occur nearby and may be occasional visitors; thus, they are considered here. Pygmy and dwarf sperm whales, Blainsville's and Cuvier's beaked whales, and nai'a are found throughout the Main Hawaiian Islands. Pygmy and dwarf sperm whales strand frequently on Maui. Killer whales have been sighted off Kaua'i, the Wai'anae coast of O'ahu, southwest Lāna'i, and off Kona, Hawai'i. Melon-headed whales are common throughout the Main Hawaiian Islands, with groups sighted off of the Wai'anae coast, southwest Lāna'i, and Kona. The sperm whale is found throughout all the Main Hawaiian Islands and the Northwestern Hawaiian Islands. The striped dolphin has been spotted off Ni'ihau and west of O'ahu.

ABUNDANCE: All estimates are from Barlow (2003) for the entire Exclusive Economic Zone of Hawai'i. Abundance estimates are the following: pygmy killer whale 817, Risso's dolphin 2,351, Longman's beaked whale 766, Fraser's dolphin 18,836, Blainsville's beaked whale 2,138, killer whale 430, melon-headed whale 2,947, sperm whale 7,080, striped dolphin 10,385, nai'a 19,900, and Cuvier's beaked whale 12,728. Pygmy and dwarf sperm whales' abundance estimates are 7,251 and 19,172 respectively. There is no evidence of decline in Hawaiian waters.

LOCATION AND CONDITION OF KEY HABITAT: The primary habitat for these whales is deep waters of 100 meters (3,300 feet) or so. Other toothed whales also live in the open ocean's deep waters, but they have more specific habitat requirements.

THREATS:

- Entanglement in fishing gear such as drift gillnets, longlines and purse seines is a major threat to all of these toothed whales. They get entangled in both operational and derelict fishing gear. Specifically, the killer whale and nai'a have been recorded as stealing bait and catch from longlines. Longline hooks can injure the whales leading to death;
- Ship collisions can injure or kill the whales. Sperm whales most notably have had problems with ship collisions;
- Man-made noise is a threat that results from high vessel traffic and military vessels that use Hawaiian waters for operations involving sonar. This man-made noise can interfere with acoustic signals critical to dolphins' reproduction and feeding. Man-made noises also have been shown to cause disturbance responses from far away, hearing loss, and physical harm. Cuvier's and Blainville's beaked whales, and killer whales are especially sensitive to noise;
- Pollution in the marine environment and its effects on whales are difficult to assess and quantify. In Hawai'i, a specific threat is plastic particles that accumulate in the archipelago. Not only do these particles contain harmful chemicals such as PCBs and DDE, but when ingested they also can cause a variety of effects such as internal injury and intestinal blocking.

CONSERVATION ACTIONS: In addition to common state-wide and marine conservation actions, specific actions include:

- Continue working to decrease derelict fishing gear and other marine debris;
- Establish a system of reporting and rescuing whales from ship collisions;
- Collaborate with partners to decrease pollutants and chemicals in the marine environment;
- Continue on-going research on stock structure, population sizes, and ecology of these toothed whales;
- Continue collaboration with NOAA, agency partners, and stakeholders in the process of considering species for inclusion in the HIHWNMS;
- Work with and assist local conservation organizations working on cetacean conservation, education, and marine debris clean-up.

MONITORING:

- Survey nearshore habitat for detailed population size and distribution;
- Monitor the number of toothed whales entangled or otherwise impacted by marine debris and taken as fisheries bycatch;
- Monitor number of whales injured by ship collisions.

RESEARCH PRIORITIES:

- Continue researching habitat use, feeding behaviors, and other biological information;
- Collaborate with NOAA to understand interactions with nearshore fisheries;
- Research impacts and toxicity of small plastic pellet debris on marine mammals;
- Determine impacts of tourism related activities on toothed whales;
- Study impacts of noise from ships on toothed whales.

References:

- Baird RW. (In Press). Sightings of dwarf (*Kogia sima*) and pygmy (*K. breviceps*) sperm whales from the Main Hawaiian Islands. *Pacific Science* 59 (3): 461-466.
- Barlow J. 2003. Cetacean abundance in Hawaiian waters during summer/fall of 2002. Administrative Report. La Jolla, California: National Marine Fisheries Service, Southwest Fisheries Science Center. Report nr LJ-03-12. 20 pp.
- Carretta JV, Muto MM, Barlow J, Baker J, Forney KA, Lowry M. 2002. U.S. Pacific marine mammal stock assessments. La Jolla, California: National Marine Fisheries Service, Southwest Fisheries Science Center. NOAA-TM-NMFS-SWFSC-346. 290 pp.
- Donohue MJ, Boland RC, Sramek CM, Antonelis GA. 2001. Derelict fishing gear in the Northwestern Hawaiian Islands: Diving surveys and debris removal in 1999 confirm threat to coral reef ecosystems. *Marine Pollution Bulletin* 42 (12): 1301-1312.
- McDermid K J, McMullen TL. 2004. Quantitative analysis of small-plastic debris on beaches in the Hawaiian Archipelago. *Marine Pollution Bulletin* 48: 790-794.
- Migura KA, Meadows DW. 2002. Short-finned pilot whales (*Globicephala macrorhynchus*) interact with melon-headed whales (*Peponocephala electra*) in Hawaii. *Aquatic Mammals* 28(3): 294-297.
- Reeves RR, Smith BD, Crespo EA, Notabartolo di Sciara G. 2003. 2002-2010 Conservation action plan for the world's cetaceans, dolphins, whales and porpoises. Gland, Switzerland: International Union for the Conservation of Nature. 139 pp.
- Reeves RR, Stewart BS, Clapham PJ, Powell JA. 2002. Guide to marine mammals of the world. New York, NY: Alfred A. Knopf, Inc. 527 pp.
- Roberts AC Meadows DW. 2003. Distribution and abundance of short-finned pilot whales (*Globicephala macrorhynchus*) and other odontocetes in the four-island region of Hawaii. Maui, Hawaii: Pacific Whale Foundation. 19 pp.